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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Yoshiyuki Kato

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EXAMINER

MEYERS, JAMES A

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

10/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/511,978

Applicant(s)

KATO, YOSHIYUKI

Examiner

James A. Meyers

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 4/10/2007, 8/22/2007
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

This action is in response to the amendment dated August 2, 2007. Claims 1-19 have been cancelled. Claims 20-39 are pending and have been considered below.

Drawings

1. Based on the amendment to the specification dated August 2, 2007, all objections to the drawing have been withdrawn.

Specification

2. Base on the amendment dated August 2, 2007, all previous objections to the specification have been withdrawn.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. Claim 30 recites the limitation "the weighted exposure detection area" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim. The claim will be examined as dependent on Claim 28, which discloses a weighted exposure detection area.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 20-23 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biegelsen et al. (US 2003/0184645) in view of Horikawa et al. (JP 2000-165850).

Claims 20 and 33: Biegelsen discloses a camera apparatus and operation method comprising:

(a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);

(b) a first detector which detects light of a predetermined wavelength included in the object image based on the image signal output from the image pickup device (page 3, paragraph 57); and

(c) a controller which executes a predetermined control operation when the light of the predetermined wavelength is detected by the detector (page 4, paragraph 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device, a determination unit which determines whether the image pickup frame is synchronized with the period of the optical signal or a synchronizing unit which shifts the phase of the image pickup frame period to synchronize with the period of the optical signal.

Horikawa discloses a tracking device including a camera (see abstract), which comprises a recording unit that records the image signal (page 3, paragraph 14). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Horikawa.

Horikawa also discloses the use of a flashing infrared light, which is read by a determination unit that determines whether the image pickup frame period is synchronized with the period of the optical signal, and acted upon by a synchronizing unit that synchronizes the image pickup frame period with the period of the optical signal by shifting the phase of the image pickup frame when it is determined that the two are not synchronized (pages 3-4, paragraphs 17-20). It would have been obvious to one having ordinary skill in the art at the time of invention that such detection and synchronizing units could be used in the apparatus and method of Biegelsen to perform the same acts. One would have been motivated to implement such units to ensure that no signals from the device emitting the infrared were lost due to arrival when the

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camera was not capturing an image (eg. during a horizontal or vertical blanking period).

Both Biegelsen and Horikawa desire this accurate capture of an incoming signal.

Claim 21: Biegelsen and Horikawa disclose a camera apparatus as in Claim 20 above, and Biegelsen further discloses that:

(a) the first detector detects a transmitting position of the light (page 3, paragraph 53); and

(b) the controller executes the predetermined control operation based on the transmitting position of the light detected by the first detector (page 3, paragraph 53; page 4, paragraph 59).

Claim 22: Biegelsen and Horikawa disclose a camera apparatus as in Claim 21 above, and Biegelsen further discloses:

(a) a second detector which detects a plurality of types of code data which are transmitted by the optical signal (page 4, paragraph 65); and

(b) that the controller executes the control operation based on the plurality of types of code data detected by the second detector (page 4, paragraph 65).

Claim 23: Biegelsen and Horikawa disclose a camera apparatus as in Claim 22 above, and Biegelsen further discloses that the first detector detects the light before the second detector detects the code data (page 3, paragraph 57).

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9. Claims 24-27, 31-32, 34-37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biegelsen et al. (US 2003/0184645) in view of Hiramatsu (US 2001/0022861).

Claims 24 and 34: Biegelsen discloses a camera apparatus and control method comprising:

- (a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);
- (b) a detector which detects a transmitting position of an optical signal in the object image based on the image signal (page 3, paragraph 53);
- (c) a specifying unit which specifies an area of the object image based on changes in the transmitting position (page 4, paragraph 59; page 5, paragraph 73); and
- (d) a controller which executes a control operation based on the area specified by the specifying unit (page 4, paragraph 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Hiramatsu discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 4, paragraph 100). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Hiramatsu.

Claims 25 and 35: Biegelsen discloses a camera apparatus and control method comprising:

- (a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);
- (b) a detector which detects a transmitting position of an optical signal in the object image based on the image signal (page 3, paragraph 53);
- (c) a recognition unit which recognizes a moving pattern of a transmitting source of the optical signal based on changes in the transmitting position detected by the detector (page 5, paragraph 73); and
- (d) a controller which executes a control operation based on the moving pattern recognized by the control unit (page 5, paragraph 73).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Hiramatsu discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 4, paragraph 100). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Hiramatsu.

Claims 26 and 36: Biegelsen discloses a camera apparatus and control method comprising:

- (a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);
- (b) a detector which detects a transmitting position of an optical signal in the object image based on the image signal (page 3, paragraph 53);
- (c) an area setting unit which sets a focus detection area corresponding to the transmitting position (page 4, paragraph 59); and
- (d) a controller which executes a focus control operation based on the focus detection area (page 4, paragraphs 59 and 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Hiramatsu discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 4, paragraph 100). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Hiramatsu.

Claims 27 and 37: Biegelsen discloses a camera apparatus and control method comprising:

(a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);

(b) a detector which detects a transmitting position of an optical signal in the object image based on the image signal (page 3, paragraph 53);

(c) an area setting unit which sets an area corresponding to the transmitting position (page 4, paragraph 59); and

(d) a controller which executes a control operation based on the area (page 4, paragraphs 59 and 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Hiramatsu discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 4, paragraph 100). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Hiramatsu.

Biegelsen also does not explicitly disclose that the area set by the area setting unit is an exposure detection area, or that the controller executes an exposure control operation. Hiramatsu discloses a camera apparatus that sets an exposure detection area and executes a control operation based on the exposure detection area (page 2, paragraphs 58-59). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention that the area setting unit and controller of Biegelsen

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could be modified for such exposure area detection and control in addition to the disclosed focus area detection and control. One would have been motivated to do so to increase the image quality when the optical signal in motion (i.e. reduce blur when the camera is tracking a moving object) as desired by Hiramatsu.

Claims 31 and 39: Biegelsen discloses a camera apparatus and control method comprising:

(a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57), wherein the object image includes an optical beam for transmitting a specific code, and the image signal includes specific code data indicating the specific code (page 3, paragraph 53; page 4, paragraph 65);

(b) a detector which detects the specific code data included in the image signal output from the image pickup device (page 4, paragraph 65); and

(c) a controller which executes a control operation based on the specific code data detected by the detector (page 4, paragraph 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Hiramatsu discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 4, paragraph 100). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image

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data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Hiramatsu.

Claim 32: Biegelsen and Hiramatsu disclose a camera apparatus as in Claim 31 above, and Biegelsen further discloses that the detector discriminates one of plural specific code data, and the controller executes the control operation based on the one of the plural specific code data discriminated by the detector (page 4, paragraph 65).

10. Claims 28 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biegelsen et al. (US 2003/0184645) in view of Hiramatsu (US 2001/0022861) as applied to claim 27 above, and further in view of Inoue (US 6,144,804).

Claim 28: Biegelsen and Hiramatsu disclose a camera apparatus as in Claim 27 above, but do not disclose that the area setting unit sets a weighted exposure detection area or that the controller executes a weighted exposure control operation based on the detection area. Inoue discloses a camera apparatus that sets a weighted exposure detection area in which a weighting factor of a portion is changed based on a distance between the portion and a detected line and executes a weighted exposure control operation based on the weighted exposure detection area (column 8, lines 30-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention that such a weighted exposure detection area could be set in the apparatus of Biegelsen with respect to the transmitting position of the signal, and that a weighted

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exposure control operation could be performed. One would have been motivated to do so to keep the subject of the image, rather than the background of the image, properly exposed while the optical signal was in motion, as desired by Hiramatsu.

Claim 30: Biegelsen, Hiramatsu and Inoue disclose a camera apparatus as in Claim 27 above, but do not explicitly disclose that the weighted exposure detection area comprises an area which surrounds the transmitting position but does not include the transmitting position. Biegelsen discloses that visible light may be used (page 3, paragraph 48), and that the camera may be controlled to an offset of the transmitting position of the signal (page 4, paragraph 50). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention that the weighted exposure detection area could comprise an area surrounding but not including the transmitting position. One would have been motivated to do so to ensure the true subject of the image was properly exposed without capturing an extraneous visual signal from the transmitter.

11. Claims 29 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Biegelsen et al. (US 2003/0184645) in view of Mitsushige et al. (JP 11-168749).

Claims 29 and 38: Biegelsen discloses a camera apparatus and control method comprising:

(a) an image pickup device which acquires an object image and outputs an image signal (page 3, paragraph 57);

(b) a detector which detects a transmitting position of an optical signal in the object image based on the image signal (page 3, paragraph 53);

(c) an area setting unit which sets an area corresponding to the transmitting position (page 4, paragraph 59); and

(d) a controller which executes a control operation based on the area (page 4, paragraphs 59 and 65).

Biegelsen does not explicitly disclose a recording unit that records the image signal output from the pickup device. Mitsushige discloses a camera apparatus with a recording unit that records the image signal output from the image pickup device (page 3, paragraph 11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to include such a recording unit in the device and method of Biegelsen. One would have been motivated to do so to store the captured image data before it was processed, ensuring that no data was lost, as desired by both Biegelsen and Mitsushige.

Biegelsen also does not explicitly disclose that the area setting unit sets a color evaluation area corresponding to the transmitting position or that the controller executes a white balance control operation based on the color evaluation. Mitsushige discloses a camera apparatus that performs color evaluation and executes a white balance control operation (page 6, paragraph 43). Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention that the area setting unit and controller of

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Biegelsen could be modified to set a color evaluation area and execute a white balance control operation based on the color evaluation area. One would have been motivated to do so to ensure that the subject of the image was appropriately white balanced, which would ensure a natural looking image as desired by Biegelsen.

Response to Arguments

12. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Meyers whose telephone number is (571) 270-1690. The examiner can normally be reached on Mon-Fri 9:30AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NgocYen Vu can be reached on (571) 272-7320. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

9/27/2007

JM


NGOC-YEN VU
SUPERVISORY PATENT EXAMINER